

WHAT IS CLAIMED IS:

1. A method for measuring a far-end reflectance of a fiber-optic cable, comprising the steps of:

connecting an end face of the fiber-optic cable to a transceiver comprising a transmitter for transmitting an optical signal and a receiver for receiving an optical signal;

transmitting an optical signal from the transmitter of the transceiver and receiving the optical signal reflected by the other end face of the fiber-optic cable, and measuring a first amount of light of the reflected optical signal, wherein the other end face of the fiber-optic cable is open to air;

transmitting an optical signal from the transmitter of the transceiver and receiving the optical signal reflected by the other end face of the fiber-optic cable, and measuring a second amount of light of the reflected optical signal, wherein the other end face of the fiber-optic cable is made to contact a solid having the same or substantially the same refractive index as that of the fiber-optic cable; and

measuring the far-end reflectance of the fiber-optic cable based on the first and second amounts

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of light.

2. A method according to claim 1, wherein when the solid has the same refractive index as that of the fiber-optic cable, the far-end reflectance of the fiber-optic cable is calculated as:

$$\text{Far-end reflectance} = \frac{P1-P2}{A \times B + P1-P2} \times 100 \quad [\%] \quad \dots (1)$$

where: P1 is the first amount of light;

P2 is the second amount of light;

A is an output of light at the far-end face of the fiber-optic cable; and

B is a ratio of light received by the receiver.

3. A method according to claim 2, wherein the solid is in the form of gel or an elastomer.

4. A method according to claim 3, wherein the solid is contained in a container.

5. A method according to claim 4, wherein the container comprises a lid having an opening, wherein a tip portion

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including the other end face of the fiber-optic cable is inserted into the opening.

6. A method according to claim 5, wherein a fixing member is provided in the opening provided in the lid, for fixing the tip portion of the fiber-optic cable to the opening.

7. A method according to claim 4, wherein an inner side of the container is covered with an optical absorption material.

8. A method according to claim 1, wherein when the solid has substantially the same refractive index as that of the fiber-optic cable, the far-end reflectance of the fiber-optic cable is calculated as:

$$\text{Far-end reflectance} = \frac{P1 - (P2 - A \times a)}{A \times B + P1 - (P2 - A \times a)} \times 100 \text{ [\%]} \cdots (2)$$

where: P1 is the first amount of light;

P2 is the second amount of light;

A is an output of light at the far-end face of the fiber-optic cable;

B is a ratio of light received by the receiver;

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and

a is a surface reflectance of the solid with respect to the fiber-optic cable.

9. A method according to claim 8, wherein the solid is in the form of gel or an elastomer.

10. A method according to claim 9, wherein the solid is contained in a container.

11. A method according to claim 10, wherein the container comprises a lid having an opening, wherein a tip portion including the other end face of the fiber-optic cable is inserted into the opening.

12. A method according to claim 11, wherein a fixing member is provided in the opening provided in the lid, for fixing the tip portion of the fiber-optic cable to the opening.

13. A method according to claim 10, wherein an inner side of the container is covered with an optical absorption material.

[illegible]

19. A method according to claim 1, wherein the solid is in the form of a plate, and the other end face of the fiber-optic cable is made to contact the solid in a slanting direction with respect to the solid.

20. A method according to claim 19, wherein the solid is covered with a material having light blocking and light absorbing capabilities.

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